

## CLAIMS

1. A standardized assay kit for detection of an anti-food antibody  
in a stool sample wherein the antibody is detected by observation of a  
reaction of the antibody with an antigen present in the kit.

2. The standardized assay kit of claim 1, wherein the kit comprises  
a single antigen for detection of a single antibody in a single stool sample.

3. The standardized assay kit of claim 1, wherein the kit comprises  
a plurality of antigens for detection of a plurality of antibodies in a single  
stool sample.

4. The standardized assay kit of claim 1, wherein the kit comprises  
a single antigen for detection of antibody in a plurality stool samples.

5. The standardized assay kit of claim 1, wherein the kit comprises  
a plurality of antigens for detection of a plurality of antibodies in a plurality  
of stool samples.

6. The standardized assay kit of claim 1, wherein the reaction is  
detected by observation of a precipitate.

7. The standardized assay kit of claim 1, wherein the reaction is  
detected by observation of an aggregate.

8. The standardized assay kit of claim 1, wherein the assay is  
performed by hand.

9. The standardized assay kit of claim 1, wherein the assay is  
performed by an automated system.

2 10. A standardized assay kit for detection of an anti-food antibody  
a matrix,  
4 at least one antigen in contact with said matrix,  
at least one discrete region on the matrix for application of the stool  
6 sample to allow for interaction between the antigen and the sample,  
wherein the antibody is detected by observation of a reaction of the  
8 antibody with an antigen present in the kit.

10 11. The standardized assay kit of claim 10, wherein the kit  
comprises a single antigen for detection of a single antibody in a single  
12 stool sample.

14 12. The standardized assay kit of claim 10, wherein the kit  
comprises a plurality of antigens for detection of a plurality of antibodies  
16 in a single stool sample.

18 13. The standardized assay kit of claim 10, wherein the kit  
comprises a single antigen for detection of antibody in a plurality stool  
20 samples.

22 14. The standardized assay kit of claim 10, wherein the kit  
comprises a plurality of antigens for detection of a plurality of antibodies  
24 in a plurality of stool samples.

26 15. The kit of claim 10, wherein the matrix comprises a gel.

28 16. The kit of claim 15, wherein the antigen is incorporated into  
the gel.  
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2 17. The kit of claim 15, wherein the antigen is loaded into a well in  
the gel.

4 18. The kit of claim 10, wherein the matrix comprises latex.

6 19. The kit of claim 10, wherein the stool sample is placed directly  
in contact with the antigen.

8 20. The kit of claim 10, wherein the stool sample is placed  
10 adjacent to the antigen.

12 21. The kit of claim 10, wherein barriers are placed between  
antigens to prevent cross-contamination.

14 22. The standardized assay kit of claim 1, wherein the assay is  
16 performed by hand.

18 23. The standardized assay kit of claim 1, wherein the assay is  
performed by an automated system.

20 22. A machine for automation of performance of a standardized  
22 stool based assay for the detection of anti-food antibodies comprising:  
a holder for receiving a stool sample;  
24 a centrifuge for the separation of solids from supernatant in a  
sample;  
26 a second holder for receiving a test apparatus;  
a fluid handling device for loading the sample supernatant onto the  
28 test apparatus;  
a humid chamber for incubation of the test apparatus;  
30 a detector to detect formation of a precipitate; and  
a recorder to record detection of a precipitate.